

REMARKS

Formalities

Claims 1-27 and 32-36 are canceled. Claims 28-31 have been amended. The amendments to the claims do not add new matter and are completely supported by the application as originally filed. Support may be found throughout the specification and originally filed claims.

Amendments to the claims are made without prejudice to the pending or now canceled claims or to any subject matter pursued in related applications. Moreover, the amendments are made solely to place the claims of the application in condition for allowance, and are not intended to limit the scope of the invention. Applicants reserve the right to prosecute any canceled subject matter at a later time or in a later filed divisional, continuation or continuation-in-part application.

Amendments to the claims made in this response are made solely to overcome the Examiner's rejections and place the claims in condition for allowance. Applicants believe that none of the amendments contained herein raise the issue of new matter or require further search or examination. Therefore, Applicants believe this response complies with the requirements for a response after final rejection set forth in 37 C.F.R. § 1.116.

Upon entry of the amendments, claims 28-31 are pending in the instant application.

Objections

The Examiner has objected to claim 32 under 37 C.F.R. § 1.75 as being a substantial duplicate of claim 30. Applicants traverse the rejection. Applicants submit that there is more than a mere difference in wording between the two claims. However, in order to place the claims in condition for allowance, Applicants have cancelled claim 32, thus overcoming the objection.

Rejections

Rejection under 35 U.S.C. § 112, first paragraph

Claims 1-12 and 17-22 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the Applicant, at the time the application

was filed, had possession of the claimed invention. Applicants respectfully traverse this rejection. In view of the cancellation of claims and amendments presented above, the Examiner's rejection under 35 U.S.C. § 112, first paragraph, is no longer relevant.

Specifically, regarding claims 28-36, the Examiner has based the rejection on an alleged lack of disclosure of BMP genes other than the gene represented by SEQ ID NO:1 and phenotypes resulting from disruption of those genes. Applicants respectfully traverse this rejection. However, Applicants have amended the claims to recite a transgenic mouse, method of producing the mouse, and cells obtained from the mouse, comprising a "disruption in an endogenous nucleotide sequence comprising SEQ ID NO:1, which is described in and supported by the specification, as noted by the Examiner in the Office Action (see page 4). In light of the amendments, Applicants have overcome the rejection under 35 U.S.C. § 112, first paragraph, and request withdrawal of the rejection.

The Examiner has rejected claim 29 under 35 U.S.C. § 112, first paragraph, asserting that the specification does not enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate with the scope of the claims. Applicants respectfully traverse this rejection.

The Examiner asserts that the specification, while enabling for a cell which lacks production of the BMP protein, is not enabling for a tissue isolated from a transgenic mouse comprising a disruption of the BMP gene. In particular, the Examiner asserts that the specification does not describe how to use such a tissue, as the phenotypes observed in the mouse would not be observed in the tissue. Applicants respectfully traverse the rejection. However, in view of the amendment to claim 29, which deletes reference to the tissue, this rejection under 35 U.S.C. § 112, first paragraph, is no longer relevant.

Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 112, first paragraph. Applicants submit that claims 28-31, as amended herein, fully meet the requirements and are patentable under 35 U.S.C. § 112, first paragraph.

Rejection under 35 U.S.C. § 112, second paragraph

The Examiner rejected claims 28-36 under 35 U.S.C. § 112, second paragraph, for allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. Applicants respectfully traverse this rejection.

Regarding claims 28-36, the Examiner has asserted that use of the phrase “exhibits at least one of a kinky tail...” renders the claims indefinite as the exact meaning of the sentence is unclear. Applicants have adopted the Examiner’s suggested modification and amended the claims to recite that the transgenic mouse exhibits “at least one of the following phenotypes: ...”.

Regarding claim 30, the Examiner asserts that recitation of “wherein the disruption in a homozygous state inhibits production of” renders the claim indefinite because the homozygous disruption allegedly does not inhibit the production of functional BMP, but instead results in lack of production of functional BMP protein. Applicants have amended the claim to recite that the disruption “results in lack of production of functional protein ...” as suggested by the Examiner.

Regarding claims 31 and 32, the Examiner has asserted that recitation of wherein the pseudopregnant mouse gives birth to a chimeric mouse” renders the claims indefinite because a pseudopregnant mouse cannot give birth to any mouse.” Applicants traverse the rejection. However, Applicants have overcome the rejection by amending claim 31 to recite “wherein said mouse gives birth to...” as suggested by the Examiner. Claim 32 has been canceled.

As a result of the amendments to the claims, the rejections under 35 U.S.C. § 112, second paragraph, are no longer relevant. Withdrawal of the rejections under 35 U.S.C. § 112, second paragraph, is respectfully requested.

Applicants submit that claims 28-31, as amended herein, are definite and particularly point out and distinctly claim the subject matter regarded as the invention in accordance with 35 U.S.C. § 112, second paragraph.

Rejection under 35 U.S.C. § 102

Claims 33-36 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Luo *et al.*, *Genes & Development*, 1995, Vol 9, pages 2808-2820 (“Luo”). Applicants respectfully traverse this rejection.

In order to place the claims in condition for allowance, Applicants have cancelled these claims. As a result, Applicants have overcome the rejection under 35 U.S.C. § 102(b). Applicants request withdrawal of the rejection. Applicants submit that claims 28-31 are not anticipated by the teachings of the prior art reference.

It is believed that the claims are in condition for allowance, and notice to that effect is respectfully requested. The Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-1271 under Order No. R-268.

Respectfully submitted,

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